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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,764	09/29/2006	Hitoshi Hata	297119US0PCT	6726
22850 7590 11/24/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
OLADAPO, TAIWO				
ART UNIT		PAPER NUMBER		
1797				
NOTIFICATION DATE		DELIVERY MODE		
11/24/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/594,764

Applicant(s)

HATA ET AL.

Examiner

TAIWO OLADAPO

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 10/09/2009 has been entered.
2. The amendment dated 10/09/2009 has been considered and entered for the record. The amendment does not overcome previous rejections which are hereby maintained. New claims rejected below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 1 – 6, 8 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tipton (US 6,372,696) in view of Watts et al. (US 6,337,309)
7. In regards to claims 1, 2, 4, 5, 13, 14, Tipton teaches lubricating automotive traction fluids such as in automatic or continuously variable transmissions (CVT) (column 1 lines 4 - 17) comprising a base oil of polymers such as dimers, trimers, tetramers of norbornanes (column 3 lines 8 – 22). As the base oil of Tipton teaches base oils as taught by applicant having the cohesive energy density limitation, the base oil of Tipton is considered to possess the cohesive energy density value recited in claims 1, 2, (see applicants' specification, page 9 lines 3 – 20).
- Tipton teaches that the lubricant has kinematic viscosities at 40°C in a range that anticipates the limitations of claim 1 (see column 19 & 20 table). Tipton also teaches the lubricant contains phosphorus compounds, including esters (column 11 lines 35-42). Tipton does not teach phosphoric esters containing thioether bond.

Watts teaches a CVT fluid similar to the invention of Tipton [0001]. Watts teaches that the fluid contains phosphorus esters of a structure I having hydrocarbyl groups R and R₁ which contains thioether bonds (column 5 lines 45 – 59). The hydrocarbyl groups contain from alkyl or aryl groups, wherein the alkyl group can be decyl which is a C₁₀ group (column 6 lines 13 – 26). The compound meets the limitations of the phosphorus ester compound of claim 4, wherein A is hydrogen and R⁷, R⁸ are decyl groups having thioether bonds.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have used the thioether bond-containing phosphite ester of Watts as the phosphorus compound in the lubricating oil of Tipton, as Watts teaches that the phosphite is useful in CVT fluids.

8. In regards to claim 3, Tipton and Watts teach the lubricating oil containing groups such as dimers, trimers or tetramers of norbornanes as previously stated.
9. In regards to claim 6, 11, Tipton and Watts teach the lubricant having overbased calcium sulfonate (column 21 table). Tipton teaches that the overbased compounds have base values (mg KOH/g) of preferably 100 and up to preferably 400 (column 8 lines 28 – 41).
10. In regards to claim 8 – 10, 12, Tipton and Watts teach the lubricating oil composition for continuously variable transmission comprising the limitations of claim 1 as previously stated. The fluid is therefore suitable for the intended use as metallic belt, traction drive, or chain type CVT lubricant according to the instant invention.

The claims are product claims that are drawn to a composition of matter and therefore statements of intended use do not carry any patentable weight. Since the reference teaches the compositional limitations, it anticipates claims 8 – 10.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tipton (US 6,372,696) in view of Watts et al. (US 6,337,309) and further in view of Conary et al. (US 6,096,691)

15. In regards to claim 7, Tipton and Watts teach the lubricating oil composition for continuously variable transmissions. Tipton and Watts teach that the lubricating oil containing optional additives such as antiwear (column 21 line 25) but does not particularly recite a sulfur antiwear.

Conary teaches gear oil additives and lubricants containing them (Title) similar to the invention of Tipton and Watts combined. Conary teaches that the additives can be, i.e. sulfur antiwear (column 1 line 35; column 17 lines 10 – 12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used sulfur antiwear additives in the composition according to Tipton and Watts combined, as Conary teaches it is a suitable antiwear additive for transmission or gear lubricating oils.

Response to Arguments

16. Applicant's arguments have been considered but they are not persuasive.

17. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

18. The applicants accept that Tipton teaches hydrogenated products of dimers, trimers, and tetramers of norbornanes and/or norbornenes but does not particularly use the materials in any of its examples. Further applicants assert that Tipton fails to teach the phosphoric ester having a thioether bond which Watts recites, nor does Watts recite using hydrogenated dimers, trimers or

tetramers of norbornanes and/or norbornenes which Tipton recites, in its composition. However, Watts was added to teach phosphoric esters suitable for use in CVT lubricants according to the invention of Tipton. Therefore the combination is proper.

19. The applicants assert there are superior unexpected results by the claimed lubricant. However, the inventive examples used to obtain the alleged unexpected results are not commensurate with the scope of the claims. The inventive examples used a Base oil 1 having CED of 0.234 GPa while the claim encompasses any oil having 0.180 GPa or more. The inventive example uses di(octylthioethyl)hydrogen phosphite as component (B) while the claim teaches phosphoric esters containing hydrocarbon groups having a thioether bond are suitable. The inventive examples use base oil and additive at specific amounts while the claim allows for any effective amount of the oil or phosphate ester. Applicants therefore have not demonstrated unexpected results sufficient to rebut the case of obviousness.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Glenn A Caldarola/
Acting SPE of Art Unit 1797